

REMARKS

Applicants have now had an opportunity to carefully consider the Examiner's comments set forth in the Office Action of August 15, 2003. In light of the amendments and remarks made herein, reexamination and reconsideration of the application are respectfully requested.

The Office Action

In the Office Action mailed August 15, 2003;

The draftsperson objected to the drawings filed on November 24, 1999;

The abstract was objected to for being written in two paragraphs and for including incorrect reference numerals;

The specification was objected to for not including reference numeral -- 216--, which is included in FIG. 3 and FIG. 4;

Claim 1 was rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,164,842 to Gauronski et al. ("Gauronski");

Claim 2 was rejected under 35 U.S.C. §103(a) as being unpatentable over Gauronski in view of U.S. Patent No. 3,936,108 to Willard et al. ("Willard");

Claims 3-6 and 10 were rejected under 35 U.S.C. §103(a) as being unpatentable over Gauronski in view of Willard and further in view of U.S. Patent No. 5,488,223 to Austin et al. ("Austin");

Claims 7 and 8 were rejected under 35 U.S.C. §103(a) as being unpatentable over Gauronski in view of U.S. Patent No. 5,832,301 to Yamaguchi ("Yamaguchi");

Claim 9 was rejected under 35 U.S.C. §103(a) as being unpatentable over Gauronski in view of U.S. Patent No. 6,011,940 to Van Lydegraf ("Van Lydegraf");

Claims 11, 13 and 14 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,559,606 to Webster et al. ("Webster") in view of Van Lydegraf; and,

Claim 12 was rejected under 35 U.S.C. §103(a) as being unpatentable over Webster in view of Van Lydegraf in further view of Gauronski.

The Present Application

By way of brief review, the present application is directed to digital printing systems wherein main job production progress is monitored so that sample copies of parts of the main job, that are designated critical or the representative of the job as a whole, can be produced on a regular interrupting basis (Abstract).

Job specifications are collected **204**. These specifications include, for example, the source for the images to be printed, the number of pages to be printed, which, if any, are to be printed in color, which, if any, are to be printed in high resolution, the size and kind of media on which they are to be printed, etc. A collection of critical or representative parts of the job is also collected **206**. The collection is a list of parts of sheets, sheets or compilations of sheets. Additionally, sample intervals for each critical or representative part are collected **208**. The sample intervals indicate how often during the production of the main job, samples of each critical or representative part should be produced.

For example, a sample interval specification might be set so that a sample of a particular sheet is produced at a sample location, such as a sample/purge tray, each time 25 copies of that sheet are produced at the main job location. Another part of the main job, less prone to error, might be sampled each time 100 copies are produced, or every twenty minutes during the main job production.

For instance, each time one of the critical or representative parts of the job is being processed, a counter is incremented. The value in that counter is tested to see if it corresponds to the sample interval specified for the incident part. If the value of the counter does correspond to the sample interval, a sample job description is generated **222** and submitted **224** to a job fulfillment process **202**. The sample job is processed and the counter is reset. (page 7, line 15 – page 8, line 30).

The Cited References

In contrast, the primary reference of the Office Action to Gauronski discloses an electronic printer with a scanner for scanning document pages of a job and converting the document images scanned to pixels, a printer for making prints of the documents from the pixels in accordance with job programming instructions, the scanner and printer operating asynchronously with respect to one another, and

interruption of a job to process a special job is effected by interrupting the job currently being scanned by the scanner to scan the special job while continuing printing of other jobs in the print que. When the special job is ready, the job is interrupted to print the special job, while scanning of the interrupted job is resumed. Printing of the interrupted job continues upon the completion of the special (Abstract).

The Office Action relies on Gauronski for disclosure of a measure of progress and for disclosure of interrupting a main job. However, it is respectfully submitted that the --Job Score Card-- of Gauronski referred to by the Office Action is not a measure of progress. Instead, it is respectfully submitted that the Job Score Card of Gauronski is related to job specification and not to monitoring or measuring job progress. In this regard, the attention of the Examiner is directed to column 5, lines 54-64, which explain, among other things, that the job score card displays the basic printing instructions to the system for printing the job.

With regard to any disclosure in Gauronski of an interrupting job, it is respectfully submitted that the proof job of Gauronski is scanned and inserted in the print que each time the proof job is desired. When scanning of the proof job is sufficient to enable printing to begin, the proof job is inserted into the succession of jobs in the print que for printing at the earliest possible moment (column 7, lines 36-39). Whereas, the sample jobs now recited in **claim 1** are specified once and produced on an ongoing basis, at, for example, a predetermined interval. It is respectfully submitted that Gauronski does not disclose or suggest such a sample job specification for producing proof or sample jobs on an ongoing basis.

Willard discloses a xerographic apparatus with sample print capabilities. Under certain circumstances, an auxiliary feed path is created to direct pages to a sample print tray. Paper deflecting fingers are provided to divert pages to the sample tray under the control of the operator in response to one of four conditions. The Office Action asserts that the disclosure in Willard, that the depression of the SAMPLE PRINT button will generate a command whereby the page being then printed will be directed to the sample print tray, and the disclosure in Willard, that the controller is programmed to cause reprinting of that page so deflected, and deliver it to the paper receiving station, maintaining output integrity (column 1, lines 63-68), is equivalent to specifying an interrupting job, that is a sampled job comprising a

component of the main job. However, the Applicants respectfully disagree.

It is respectfully submitted that the depression of a SAMPLE PRINT button, whereby a page being printed will be directed to a sample print tray is not a disclosure or a suggestion of specifying and interrupting job as disclosed and claimed in the present application. 17

For example, a job specification process begins with a collection of job specifications. These specifications include, for example, a source for the images to be printed, the number of pages to be printed, which if any, are to be printed in color, which if any are to be printed in high resolution, the size and kind of media, on which they are to be printed, etc. (page 7, lines 15-21, page 8, lines 31-34).

Austin allegedly discloses a system and method for the automatic selection of printer operating parameters using a preprinted barcode image on a portion of a selected print medium or a separate sheet of bar code parameters and commands. The bar code image specifies characteristics of the selected print medium. A bar code scanner operates in conjunction with a bar code printer and scans the bar code image (Abstract).

It is respectfully submitted that Austin is non-analogous art with respect to the claims of the present application. One concerned with developing a method for producing interrupting jobs during the processing of a main job in a document processing apparatus, would not look to Austin.

Even if Austin is analogous art, Austin does not include the subject matter asserted by the Office Action. The Office Action alleges that Austin discloses that a sample can be output at predetermined intervals. The Applicants respectfully disagree. 18

Instead, Austin asserts that the bar code system can automatically adjust the printer operating parameters to compensate for changes in the print engine or environmental changes, such as ambient temperature changes. For example, a verifier of Austin continuously scans the output images and the printer optimizer of Austin dynamically adjust the printer operating parameters. This allegedly compensates for changes in print quality resulting from changes in the ambient temperature. Austin further notes that it is not necessary to scan every output image to verify the quality of the output image. Rather, the system can sample the output image and statistically determine the quality of the output images. A sampled

output image can be analyzed at predetermined periods of time, such as every five minutes, or at predetermined intervals, such as every tenth output image (column 10, lines 18-33). Austin suggests analyzing or measuring main job output at predetermined intervals. However, Austin does not disclose or suggest outputting a sample job.

Yamaguchi allegedly discloses a printer server system for interrupting a job from a first terminal for a job from a second terminal based on detected priorities. The Office Action relies on Yamaguchi for disclosure of the transmission of a priority level, along with a print job.

Van Lydegraf allegedly discloses embodiments of an electrophotographic printer, each embodiment having a paper exit system for collating convenience copies separate from the printed pages from a host device's job. The exit system includes a first paper path and a second paper path joining at a junction, with a rotating member that operates in the junction to direct the paper to the first path or to the second path, either by contacting and turning the paper or by allowing the paper to proceed unobstructed. The rotating member is controlled by an interrupt/queuing logic system and a mechanical switch that automatically rotates the rotating member when an interrupting convenience copy is started, so that the convenience copies will travel to the opposite path and housing port and those being used for the current, host's job. Once the interrupting job is done, the logic system automatically switches the rotating member back to its original position (Abstract).

The Office Action relies on Van Lydegraf for disclosure of an exit system, wherein an interrupting job is output to a different exit port than an interrupted main job.

Webster discloses an electronic image processing apparatus having a controller and a plurality of resources in an arbitrary configuration. Each of the resources includes an associated processor storing data relating to operational constraints of the associated resource and a bus interconnects the processors to the controller for directing the operation of the resources. The controller is adapted to operate independent of a particular configuration of the plurality of resources by receiving from each of the processors the data related to the operational constraints of each associated resource and interrogating each of the processors to determine the geometrical relationship of the interconnection of the resources.

The Office Action relies on Webster for disclosure of a document processing apparatus comprising a plurality of machine modules in communication with each other through a mark facility controller for processing and producing printed media.

The Drawings are Proper

The Draftsperson objected to the drawings filed November 24, 1999. However, Formal Drawings replacing those drawings were filed August 7, 2002 and received in the O.I. P.E. on August 12, 2002.

Additionally, replacement sheets including corrections to Formal FIG. 3 and FIG. 4 are being submitted herewith.

In FIG. 3, the words --Generate A-- in box 224 are being replaced with the words --Submit The--. Additionally, an extra flow line is being deleted from the lower right corner.

In FIG. 4, the word --When-- in box 254 is being replaced with the word --About-- and the reference numeral 224 is being added. Additionally, an extra flow line is being deleted from the lower right corner.

These changes correct errors made during the creation of Formal Drawings and bring the figures into agreement with the originally filed informal drawings. As such, the replacement sheets do not include new matter.

The Claims are not Anticipated

Claim 1 was rejected under 35 U.S.C. §102(b) as being anticipated by Gauronski. In explaining this rejection, the Office Action asserts that a Job Score Card disclosed by Gauronski inherently represents a measure of progress. As explained above, the Applicant respectfully disagrees. It is submitted that the Job Score card of Gauronski is related to job specification and not to monitoring or measuring progress of a job (column 5, lines 54-64).

Additionally, the Office Action asserts that Gauronski discloses interrupting a main job and directs the attention of the Applicants to column 7, lines 35-52, in support of this assertion. However, **claim 1** has been amended to recite specifying a sample job including at least one representative part of the main job, specifying a sample interval for the at least one representative part, interrupting the main job at a point when productivity is maintained and media is not wasted based on the at least

one measure of progress and the specified sample interval, producing the sample job and resuming the main job.

It is respectfully submitted that Gauronski does not disclose or suggest specifying a sample interval for the at least one representative part or interrupting a main job based on at least one measure of progress and the specified sample interval.

For the foregoing reasons, **claim 1** is unanticipated by Gauronski.

It is respectfully submitted that the amendments to **claim 1** are based on subject matter from original **claims 2 and 3**. Therefore, the amendments to **claim 1** should not require a new search.

Claim 2 was rejected under 35 U.S.C. §103(a) as being unpatentable over Gauronski in view of Willard. In explaining this rejection, the Office Action asserts that Willard discloses an operation for a printer where a currently running main job is interrupted in order for a sample page of said print job to be sent to a sample print tray and then the main job is restarted, and that this is equivalent to specifying an interrupting job that is a sample job comprising a component part of the main job. The Applicants respectfully disagree.

In support of the assertion regarding Willard, the Office Action directs the attention of the Applicants to column 1, line 60 to column 2, line 12. However, the referenced section explains that in a third mode of operation, the depression of the SAMPLE PRINT button will generate a command, whereby the page being then printed, will be directed to the sample print tray. It is respectfully submitted that this is not a disclosure or a suggestion of specifying a sample print job. Instead, Willard discloses diverting a page from a main print job to a sample tray. Even though, Willard discloses maintaining output integrity by reprinting the page so deflected, and delivering it to the paper receiving station (column 1, lines 66-68), Willard does not disclose or suggest the --specifying a sample job comprising a component part of the main job-- disclosed and claimed in the present application

It is respectfully submitted, that the diverted page of Willard is relatively randomly selected and might not be a representative or critical component of the print job.

For the foregoing reasons, **claim 2** as originally filed, as well as the subject matter from **claim 2**, now incorporated in **claim 1**, is not obvious and is

unanticipated in light of Gauronski and Willard, taken alone or in any combination.

For the foregoing additional reasons, **claim 1** is unanticipated and obvious in light of Gauronski and Willard, taken alone or in any combination.

Claims 3-6 and 10 were rejected under 35 U.S.C. §103(a) as being unpatentable over Gauronski in view of Willard and further in view of Austin. **Claim 10** and original **claim 3** recite, among other things, specifying a sample interval for each specified representative part. Original **claims 4-6** depended, directly or indirectly from **claim 3**. In explaining the rejection of **claims 3-6 and 10**, the Office Action asserts that Austin teaches that a sample can be output at a predetermined interval. The Applicants respectfully disagree.

Instead, Austin discloses automatically adjusting printer operating parameters to compensate for changes in the print engine or environmental changes such as ambient temperature changes. For example, the verifier **188** of Austin continuously scans the output images and the printer optimizer **190** dynamically adjusts the printer operating parameters. This compensates for changes in print quality resulting from changes in the ambient temperature. Austin goes on to note that it is not necessary to scan every output image to verify the quality of the output image. Rather, the system can sample the output image and statistically determine the quality of the output images (column 10, lines 18-29).

It is respectfully submitted that Austin merely discloses that it is possible to reduce a processors workload by measuring quality aspects of main job output periodically instead of continuously. It is respectfully submitted that this is not a disclosure or suggestion of generating sample jobs based on a predefined interval.

For the foregoing reasons, original **claim 3** and the subject matter from **claim 3**, now incorporated in **claim 1**, as well as **claims 4-6**, which now depend from **claim 1**, and **claim 10** are unanticipated and unobvious in light of Gauronski, Willard and Austin taken alone or in any combination.

For the foregoing additional reasons, **claim 1** is unanticipated and unobvious in light of Gauronski, Willard and Austin taken alone or in any combination.

Claim 4 has been amended to recited interrupting the main job comprises measuring an interval for each specified representative part, determining if the specified sample interval has elapsed for any of the specified representative parts and generating a sample job specification corresponding to any representative part

for which the specified sample interval has elapsed. In explaining the rejection of **claim 4**, the Office Action asserts that "Austin's disclosure of outputting a sample at predetermined interval inherently includes the step of measuring the interval for the sample, or representative part and determining if the interval has elapsed since this is a necessary step to outputting a sample at a predetermined interval". However, as explained above, Austin does not disclose outputting a sample. Instead, Austin discloses taking a periodic measurement (or sample). Additionally, the Office Action asserts that Willard's disclosure of printing a sample page inherently includes the step of generating a sample job, since this is necessary in order to print the sample page. However, **claim 4** does not recite generating a sample job, instead, **claim 4** recites generating a sample job specification corresponding to any representative part for which the specified sample interval has elapsed. Furthermore, Willard does not disclose or suggest generating a sample job. Instead, Willard discloses diverting a page from a main job.

For the foregoing additional reasons, **claim 4** is unanticipated and unobvious in light of Gauronski, Willard and Austin taken alone or in any combination.

In explaining the rejection of **claim 10**, the Office Action stipulates that Gauronski does not disclose specifying which parts are representative, specifying a sample interval for each of the representative parts of the job, and measuring intervals for each of the specified representative parts. However, the Office Action asserts that the sample page of Willard is inherently a representative part of the job and its selection for printing is inherently the specification of which parts of the job are representative. The Applicants respectfully disagree.

As explained above, it is respectfully submitted that the diverting of a page disclosed by Willard is somewhat random. The Applicants do not find any disclosure in Willard of making an intelligent selection for diverting a representative page to the sample print tray. Therefore, a black and white page maybe diverted where a representative part would include color, or a photograph page may be diverted to the sample tray where a representative part of the print job would be text. For the foregoing reasons, it is respectfully submitted, that the diverted page of Willard is not inherently a representative part of the job. Furthermore, the diversion of a page from a main print job is not inherently the specification of a part of a job that is representative, especially as the term --job specification-- is used in the

present application (page 7, line 15 - page8, line 34).

Additionally, in explaining the rejection of **claim 10**, the Office Action asserts that Austin teaches that an output can be sampled at a predetermined sample interval. However, Austin uses the word sample to refer to a measurement. Austin does not disclose or suggest producing a sample print job at a predetermined interval.

For the foregoing additional reasons, **claim 10** is unanticipated and unobvious in light of Gauronski, Willard and Austin taken alone or in any combination.

Claims 7 and 8 were rejected under 35 U.S.C. §103(a) as being unpatentable over Gauronski in view of Yamaguchi. **Claim 7 and 8** have been canceled.

Claim 9 was rejected under 35 U.S.C. §103(a) as being unpatentable over Gauronski in view of Van Lydegraf. **Claim 9** has been amended to recite producing the sample job further comprises delivering the sample job at a convenient location apart from the main job delivery location. **Claim 9** depends from **claim 1** and is unanticipated and unobvious at least for that reason.

Claims 11, 13 and 14 were rejected under 35 U.S.C. §103(a) as being unpatentable over Webster in view of Van Lydegraf. However, **claim 11** has been amended to recite among other things, a plurality of machine modules, at least one computing platform, a plurality of document collection points, at least one of the plurality of document collection points designated, at least temporarily, as a sample job delivery point, wherein the at least one computing platform is operative to receive a job specification, a representative part specification and a sample interval specification and to control the plurality of machine modules to produce a job according to the received job specification and to produce samples according to the representative part specification at intervals determined by the sample interval specification.

It is respectfully submitted that Gauronski, Willard, Yamaguchi, Austin, Van Lydegraf and Webster taken alone or in combination, do not disclose or suggest receiving a job specification, receiving a representative part specification, and receiving a sample interval specification. Furthermore, those references do not disclose or suggest controlling a plurality of machine modules to produce a job

according to the received job specification and to produce samples according to the representative part specification at intervals determined by the sample interval specification.

For the foregoing reasons, **claim 11**, as well as **claims 12-14**, which depend therefrom is unanticipated and unobvious in light of Gauronski, Willard, Yamaguchi, Van Lydegraf and Webster, taken alone or in any combination.

Telephone Interview

In the interests of advancing this application to issue the Applicant(s) respectfully request that the Examiner telephone the undersigned to discuss the foregoing or any suggestions that the Examiner may have to place the case in condition for allowance.

CONCLUSION

For the reasons detailed above, it is respectfully submitted all claims remaining in the application (**Claims 1, 4-6 and 9-14**) are now in condition for allowance. The foregoing amendments are based on previously presented subject matter and should not require an additional search or create an undue burdon on the Examiner.

No additional fee is believed to be required for this Amendment A. However, the undersigned attorney of record hereby authorizes the charging of any necessary fees, other than the issue fee, to Xerox Deposit Account No. 24-0037.

In the event the Examiner considers personal contact advantageous to the disposition of this case, he/she is hereby authorized to call Patrick Roche, at Telephone Number (216) 861-5582.

Respectfully submitted,

FAY, SHARPE, FAGAN,
MINNICH & McKEE, LLP

Nov. 17, 2003
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CERTIFICATE OF MAILING

I hereby certify that this Amendment A is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on Nov 17, 2003

By: Stephanie Weinhardt

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